DOCUMENT RESUME

ED 250 966 HE 017 693

AUTHOR Bugliarello, George
TITLE What Limitations on Professorial Relations With Industry?
PUB DATE 28 May 84
NOTE 9p.; Paper presented at the Annual Meeting of the American Association for the Advancement of Science (May 28, 1984).
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *College Faculty; *College Role; Economic Factors; Economic Opportunities; Financial Problems; Higher Education; *Industry; *Multiple Employment; *School Business Relationship; Teacher Role; Values

ABSTRACT

Commercial pressures that affect faculty members and universities are discussed, along with the consequences of these pressures. It is essential that the faculty member be a role model and a practitioner of objectivity. Faculty members with commercially-valuable knowledge can have a greater commitment to the commercial application of their knowledge than to the university. A new kind of university emerges with an active interest in becoming a partner in business ventures with industry and with its own faculty, in developing research parks, and in engaging in other entrepreneurial ventures. The fundamental stress within the university comes from a clash of fundamental values--commitment to knowledge versus commitment to wealth production. It is important that attention be directed to how new commercial pressures and arrangements affect the impartiality of the university in matters of knowledge and judgment. If many universities become involved in special business deals in order to remain competitive, impartiality is at stake. On the other hand, the universities have served to promote economic and technological development. Each university needs to decide which role it prefers to emphasize, or which is the best mix between the two roles. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Presentation at AAAS Annual Meeting
New York May 28, 1984

WHAT LIMITATIONS ON PROFESSORIAL RELATIONS WITH INDUSTRY?

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
George Bugliarello
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

by
Georrge Bugliarello
President
Polytechnic Institute of New York

That the university today is subject to strong commercial pressures from within and from without is undeniable. These pressures arise from the activities and wishes of some faculty members, as well as from the quest by commercial enterprises to utilize the expertise of the university. The fundamental question that confronts the university and our society is: are the pressures so unprecedented in scale and nature that they are destroying the traditional role and function of the university, or are they just another chapter in that tug of war between aloofness and direct involvement in community activities that has been going on for a long time?

Commercial Pressures

Let me begin by reviewing the commercial pressures on the university: both those on the faculty and those on the institution as a whole.

The commercial pressures from within, in order of ascending magnitude, come from faculty whose students can very rapidly earn much more than they do, or whose colleagues in industry enjoy higher salaries, and from faculty who find their services as consultants very much in demand, thus generating time conflicts with their academic duties. But above all the pressures come from faculty possessing knowledge that can be developed into a business enterprise, with the

potential for substantial rewards.

The fact that the financial rewards of scholars are less than those of their former students and of other professions is not new. Neither is the presence of scholar-consultants new, and even scholar-entrepreneurs, who have been operating within the American universities and in Europe for quite some time. (Suffice it to remember, in the latter category, the genesis of firms such as Edgerton-Gremerhauser or Bolt-Beranek-Newman.) But it is only in the last four or five years that income disparities with the outside have become more marked, and the temptations of entrepreneurship more widespread and potentially more rewarding.

In a society in which the way to riches depends increasingly on knowledge and information, it is far more difficult for professors -- who deal in these commodities -- to resist the temptation to get rich or at least affluent, particularly because the road to entrepreneurship is more open than ever before, capital is more easily available, and everyone with a sense of entrepreneurship can hope to make it.

Although not all the fields in the university offer the same opportunity for commercial rewards, the opportunity is by no means limited to faculties in science and engineering, but extends to other disciplines that possess knowledge with a commercial potential. For instance, anyone who can assemble a specialized data base or write a program for handling data or performing tasks in a given field -- even programs for grading term papers -- can attempt to build a business to market his skills.

Equally strong are the pressures on the university as a whole to draw advantage from the fact that it is an institution representing

the single most concentrated and at the same time most diversified source of information and research in our society. Hence the university is a logical target for pressures by businesses increasingly aware of the competitive advantage of knowledge, and bent on finding better ways of unlocking the university's treasure house.

These commercial pressures on the university as a whole are more difficult to resist -- assuming that they should be resisted -- than in the past for a number of reasons.

In the first place, the universities, particularly in the last 15 years, have been encountering great difficulties in acquiring modern and increasingly expensive equipment. Federal support, even in the best of times, does not begin to cover this ever-increasing expense. In a number of areas, such as semi-conductor manufacturing, the costs of equipping the universities for research are so great that only a handful of universities can attempt to do it on their own. Most universities look increasingly at some form of support from industry -- even of partnership with industry -- to acquire much needed facilities.

In the second place, the evergrowing general financial needs of the universities lead boards of trustees and administrations to pursue any conceivable new source of revenue, and industry is a logical one.

Thirdly, the contraction in the interest of American engineering and, to a lesser extent, physical science students to pursue doctoral work (another indirect result of commercial pressures) also favors the seeking of new arrangements with industry that might lead to an increase in the number of Ph.D. students.

Finally -- little talked about but actually a major factor -- is

the ambition and competitiveness of the universities themselves. If Stanford does something, Harvard will probably try it next -- and viceversa. This, strangely enough, affects far more the universities that enjoy the largest resources and thus could take, if they wished, a stronger position in resisting commercial pressures.

Impact on Faculties and Universities

What are the consequences of these commercial pressures on the university and its faculty? The first is the emergence of a new kind of independent faculty member. In the post-Sputnik period -- from the 1960's to the 1970's -- faculty members with substantial government grants had, it was said, only a contingent loyal to their institution. They easily moved around universities shopping for the best deal. Analogously, today's faculty members with commercially valuable knowledge can have a greater commitment to the commercial application of their knowledge than to the university. They can weave in and out of a university even more easily than their government sponsored colleagues in the 60's, and can even become business partners of the university.

A second consequence is the emergence, in effect, of a new kind of university, with active interest in becoming partner in business ventures with industry and with its own faculty, in developing research parks, and in engaging in other entrepreneurial ventures.

This new university is also one with internal stresses. The stresses of differential opportunity among its faculty make in some sense the university almost the antithesis of a traditional or stereotyped community of scholars. It is important to note, however, that basically these stresses are not different from those in the

'60's, when the university was so much more strongly committed to government work. What is different is that in the 1960's the opportunities were primarily in the physical sciences and in engineering, while today they have extended to biology, computers and mathematics, as well as to economics -- areas where commercial opportunities often overshadow those in physical sciences and engineering.

But the most fundamental stress within the university comes from a clash of fundamental values -- the traditional ones of the university as an institution with dispassionate commitment to knowledge, versus the new values of the university as an increasingly important instrument of wealth production. Of course the university has always been such an instrument in an indirect sense. But when the university is directly committed to wealth production and has a material share in it, it is not any more a neutral ground between business and other societal concerns and activities, and it is not any more pursuing knowledge for knowledge's sake alone.

The Future

What does the future hold? Let me offer some observations and perhaps some answers.

We must begin by recognizing that, regardless of what public stance universities take in response to the pressures on their values (with often equally excellent universities taking in public diametrically opposite stances), in reality most universities will try to compromise, and wish away any too explicit or stringently categorical policy.

Secondly, I believe that the impartiality of the university in matters of knowledge and judgement is a fundamental characteristic of that institution, and must be preserved, lest society be forced to

create another institution with the required neutrality. Within the university, impartiality is usually achieved by the attitudes of the professors, and by a balance of forces. If a faculty member is biased, his colleagues will try to compensate for or correct that bias. It is, thus, essential that we look very carefully at how the new pressures and resulting arrangement affect impartiality.

The problem becomes more serious when a university as a whole, rather than just individual faculty members, is beholden to specific commercial interests. However, few universities that abandon their core values and tend to operate more and more like a business do not create a major problem, if impartiality can be attained through the balance provided by other universities that are not so beholden to business, or to being businesses themselves. But if many universities indulge each in their special business deal, in order to remain competitive, impartiality through pluralism becomes more elusive. Society may then take a critical look at the university as an institution and reassess its privileges.

With these caveats, it must be said that at this moment there is no strong evidence of an overall weakening of the impartiality of universities, both as individual institutions and as a system of institutions. Pluralism seems to work.

But impartiality is but one side of the issue! The other is the use of the university as an engine for economic and technological development. This role is the primary reason why universities are allowed to absorb very substantial national resources. A pure search for knowledge would not have yielded as extensive a university research establishment as exists today. In terms of national goals and

needs, the involvement of the university and its faculty in activities of a commercial nature, is per se not an evil. Quite to the contrary, it only becomes an evil when it weakens the overall impartiality of the university as an institution, and when it destroys the figure of the professor as a role model and a practitioner of objectivity.

Thus it is essential for each university to search its soul and decide which role it prefers to emphasize or which is the mix between the two roles that best expresses its aspirations and its collective personality. To find such a mix cannot be left to a formula coming from the outside -- one that would absolve administration, faculty and trustees alike from facing up to the hard but essential task of making a decision.

In brief, I would like to suggest that each university should be free to decide the role it wants to play, and to stake its future directions, its future success and indeed its future survival as a valid institution on that decision. Once it decides on a role, it must take a very hard look at its structure and at how it operates. It is this kind of examination that led to the establishment of the Lincoln Labs, the Jet Propulsion Laboratory and similar para-academic operations.

Having said that, I do not believe that the future of the independent scholar-- faculty member will vanish, unless the universities abandon wisdom in making their decisions. Most scholars come to the university because of a conscious decision that material rewards are not the sole purpose of life (but this does not exempt society and the university from the duty of rewarding them).

Thus the imperative is wisdom, both in society and in the university. Perhaps Sallust in his history of the conspiracy of Catiline,

best states how, with wisdom, there need not be conflict:

> "Success in agriculture, seafaring or building always depends on human excellence....The truth is that no man really lives or gets any satisfaction out of life, unless he devotes all his energies to some task and seeks fame by some notable achievement or by the cultivation of some admirable gift. The field is wide, and men follow their natural bent in choosing this path or that."

END

DEPT. OF EDUCATION

NAT'L INSTITUTE OF EDUCATIO

ERIC

DATE FILMED

MARCH

27 - 1985